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Drainless parotidectomy and the same day discharge with routine use of topical haemostatic agent and Balaclava bandage

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Conflict of Interest

None

Keypoints

- The routine use of neck drain in parotidectomy is common practice however, its benefit remains controversial.
- Drainless parotidectomy is a feasible approach with the intra-operative prophylactic use of a topical haemostatic agent and post-operative application of a pressure bandage
- The omission of routine drain insertion facilitates the same day discharge for suitable patients undergoing parotid surgery.

1 Introduction

Parotidectomy is one of the most common elective head and neck operations. The routine use of neck drains in parotid surgery is not an uncommon practice and this often necessitates at least an overnight hospital stay. Traditionally, drain insertion in head and neck procedures is to obliterate the remaining dead space, to allow drainage of any blood or fluid collection and to reduce the risk of local infection. However, there is no clear evidence that neck drains significantly improve patient outcome in head and neck operations ^[1, 2].

In this technical note, we report our practice of drainless parotidectomy. This technique employs the regular use of a topical haemostatic agent and a compression dressing. These aim to achieve sufficient haemostatic control, which in turn permits the avoidance of routine neck drain insertion after parotid surgery. Patients, who do not require a neck drain, are routinely assessed for same day discharge.

2 Technical Description

The operation is performed under general anaesthesia with the patient placed in a supine position with their head tilted to the opposite direction. A lazy-S, facial plastic or modified Blair neck incision is made. Parotidectomy, depending on the extent required, is performed. In our unit, the facial

nerve monitor is routinely used throughout the procedure. A 8W bipolar diathermy (Covidien®) is employed. To minimise inadvertent thermal injury, wet neurosurgical patties are applied to the adjacent tissues while electrocautery is used.

Following resection of the lesion, the defect on the remaining parotid bed is assessed. Depending on its extent, in some cases, additional measures are undertaken to reduce the defect size. In our experience, this can be achieved by direct approximation of the wound bed with sutures, or by application of a superiorly based partial thickness sternocleidomastoid muscle flap onto the remnant parotid bed.

Meticulous haemostasis is vital. Once the repair is completed, additional haemostatic measure is undertaken by identifying any bleeding points with 3 cycles of Valsalva manoeuvre. This is administered with the patient positioned in a 30 degree reverse Trendelenburg position. Each cycle is performed at 40 cm pressure for 40 seconds, at 2 minute intervals.

At this stage, if the haemostasis control is deemed satisfactory, a neck drain is not routinely inserted. A topical haemostatic agent is then applied, with either a spray or microdot technique, to produce a thin uniform layer covering the remnant parotid bed. To further facilitate drainage of any fluid collection, one to three mini-stab incisions can be placed along the anterior skin incision followed by wound closure [Figure 1]. These mini-incisions (~3mm) are made with a size 11 blade anterior to the cervical limb of the incision, below the angle of the mandible and preferably along the skin creases. Although scars are unavoidable at the early period, they tend to be cosmetically negligible and this was consistently observed in our preliminary follow up series.

Once the operation is completed, a compression dressing (Jobskin®) or 'Balaclava' bandage is applied. The Lycra fabric dressing, available in different sizes, is first positioned under the chin and the two adhesive bands are fastened over the top of the head. There are two sets of smaller adhesives ends to be fastened at the back of the patient's head and be adjusted as required [Figure 2]. To prevent early dressing soakage and to apply further focal compression, the wound can be padded with swab gauze upon bandage application.

At 4 hours post-operatively, a review is carried out on the ward by the operating surgeon, together with nursing staff and the patient's carer. Without removing the dressing secured over the top of the head, the adhesive ends at the lower occiput are opened up for wound examination. This key step is demonstrated and taught to the patient and their carer(s). In the presence of excessive bandage soakage, the dressing should be changed before its re-application. In the absence of any significant complication, the patient is allowed home on the same day, usually 4 to 5 hours after the surgery.

Each patient is provided with a leaflet containing information on post-operative wound care and telephone number for the ward to discuss any concern. Specifically, patients are instructed to take down the pressure bandage to examine the wound at 24 hours after discharge and at 48 hours, the dressing can be fully removed.

An outpatient clinic review is arranged with the operating surgeon at 3 weeks post-operatively. Patient satisfaction is assessed with a questionnaire.

3 Discussion

In the current NHS economic climate, increasing demands and emphasis are placed on cost-effectiveness and resource utilisation. Percutaneous neck drains in parotid surgery often precluded patients from being discharged on the same day, rendering parotidectomy an inpatient procedure in most units in the UK. While robust literature evidence on neck drain usage is concentrated on thyroidectomy and neck dissection, studies on the benefits of drains in parotidectomy remain scarce [2, 3]. In a systematic review by Bajwa et al [3], the use of fibrin sealants were concluded to have statistically significant difference in reducing volume of wound drainage, based on a randomised controlled trial by Maharaj et al [4]. Notably, Conboy and Brown [5] from Canada and Chua et al [6] from Singapore have demonstrated in their parotidectomy series, the safety and efficacy of haemostatic agents without the need for percutaneous drains. In addition, these were shown to obviate drain-related morbidities and economic health benefits were further demonstrated [5, 6]. Pressure bandage, on the other hand, has long been used in otological procedures to good effect. Nevertheless, the combination of these two haemostatic methods have yet to become common practice for parotidectomy in the UK.

With emerging evidence on safety profile and effectiveness as an adjunct for bleeding control, topical haemostatic agents are gradually gaining popularity in head and neck surgery [7-10]. The two haemostats commonly used in our unit are Floseal® (Baxter Healthcare) and Tisseel® (Baxter Healthcare), each with different mechanism of action. Floseal® provides a proprietary combination of two independent haemostatic agents of bovine gelatine and human thrombin. On the other hand, Tisseel®, a fibrin sealant, produces a cross-linked insoluble fibrin matrix, mimicking a physiological clot. It is also effective in patients who are heparinised or on anti-platelet medication. The choice of haemostats will depend on the size of the defect and consideration of patient's anticoagulation status. Through the routine intra-operative use of a topical haemostatic agent and the post-operative application of a compression dressing, these additional haemostasis measures allow the omission of routine neck drainage in parotid surgery.

In conclusion, drainless parotidectomy is a safe and feasible approach which facilitates the same day discharge and should be routinely considered in suitable patients.

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